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87:151695 Bactericidal alkylene polyamines. Ito, Hirohiko; Mizuno, Yasushi; Yamamoto, Tsuneo (Takemoto Oil and Fat Co., Ltd., Japan). Jpn. Tokkyo Koho JP 52018047 B4 19770326 Showa, 5 pp. (Japanese). CODEN: JAXXAD. APPLICATION: JP 1972-114766 19721117.

AB  $R_1R_2NZ(NR_3Z)_nNR_4R_5$  (I;  $R_1-5 = H$ , 3-alkoxy-2-hydroxypropyl;  $Z = C_2-3$  alkylene,  $n = 1, 2$ ), effective bactericides and fungicides against *Salmonella typhosa*, etc., were prepd. by reaction of  $H_2NZ(NHZ)_nNH_2$  (II) with alkyl glycidyl ethers. Thus, 29 parts II ( $Z = CH_2CH_2$ ,  $n = 1$ ) was heated with 70 parts 2-ethylhexyl glycidyl ether at 180.degree. to give the corresponding I, the HCl salt of which was 90 times more effective against *Salmonella typhosa* than was  $PhOH$ .

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51:27873 Original Reference No. 51:5440g-i,5441a-b Stable dye baths. Hofer, Kurt; Hemmi, Hans M. (Sandoz Ltd.). CH 313159 19560515 (Unavailable).

APPLICATION: CH .

AB Cations of the formula  $\text{RCH}_2\text{CH}(\text{OH})\text{CH}_2(\text{N-A})_n\text{N}(\text{I})$ , in which R is an alkoxy radical contg. at least 8 C atoms and may also contain oxygen, A is an alkylene residue with 2-4 C atoms, and n is an integer, are added to dye baths to reduce the speed of dyeing or redyeing. The cations are obtained by treating  $\text{RCH}_2\text{CH}(\text{OH})\text{CH}_2\text{O}$ ,  $\text{RCH}_2\text{CH}(\text{OH})\text{CH}_2\text{X}$ , or  $\text{RCH}_2\text{CHXCH}_2\text{OH}$  (where X = halogen) with polyamines of the formula  $\text{HNR}'[\text{A-NR}'' ]_n\text{-1-ANR}'''\text{R}''''$ , in which R', R'', R''', and R'''' are H, alkyl, aralkyl, hydroxyalkyl, or poly(glycol ether) radicals. Thus,  $\text{C}_8\text{H}_{17}\text{OCH}_2\text{CH}(\text{OH})\text{CH}_2\text{O}$  (I) 1 mole is treated with  $\text{H}_2\text{N}(\text{CH}_2\text{CH}_2\text{NH})_2\text{H}$  (II) 2 moles at 100-20.degree.. The excess II is distd. off in vacuo, the residue is treated with ethylene oxide (III) 8 moles at 100.degree., and subsequently at 50-60.degree. with  $\text{Me}_2\text{SO}_4$  3 moles. The mixt. is heated 2 hrs. at 80-5.degree. and yields a brownish, viscous,  $\text{H}_2\text{O}$ -sol. product. Replacing the octyl radical in I with dodecyl, 9-octadecen-1-yl, isooctylphenyl, methylcyclohexyl, etc., varying the amts. of III or replacing III with  $\text{ClCH}_2\text{CO}_2\text{H}$ , or replacing II with  $\text{H}_2\text{N}(\text{CH}_2\text{CH}_2\text{NH})_3$  or 4 H, 3-isopropylamino-1-propylamine, or 3-dimethylamino-1-propylamine yields similar products. A small addn. (2.5-12%) of these products to dye baths or vats insures level dyeing. A bath contg. 30%  $\text{NaOH}$  15 cc.,  $\text{NaHSO}_3$  5 g., a I 0.45 g., and 9-octadecen-1-yl polyglycol ether (20  $\text{CH}_2\text{CH}_2\text{O}$  groups) 0.55 g. in  $\text{H}_2\text{O}$  1 l. at 95-100.degree. removed within 30 min. the unevenly distributed dye on a 25 g. cotton-cretonne fabric.